MODEL TH111GFCI-P (240 VAC)

SUMMARY

- **OPTIONS SELECTION**

  At the back of the thermostat, there are 3 selection switches to set at your preferences.

⇒ Temperature in °C or °F, time in 12 or 24 hours and Early Start function.

- TO SET TIME AND DAY

  Press on DAY, HOUR and MIN buttons to adjust time and day.

- TO RECORD THE ☼ (COMFORT) SETPOINT TEMPERATURE

  Select chosen setpoint temperature by using ▲ or ▼ button. Press on ☼ button (2 to 3 seconds) until icon appears on display.

- TO RECORD THE ☾ (ECONOMY) SETPOINT TEMPERATURE

  Select chosen setpoint temperature by using ▲ or ▼ button. Press on ☾ button (2 to 3 seconds) until icon appears on display .

- CHECKING GROUND FAULT CIRCUIT INTERRUPTER (GFCI)

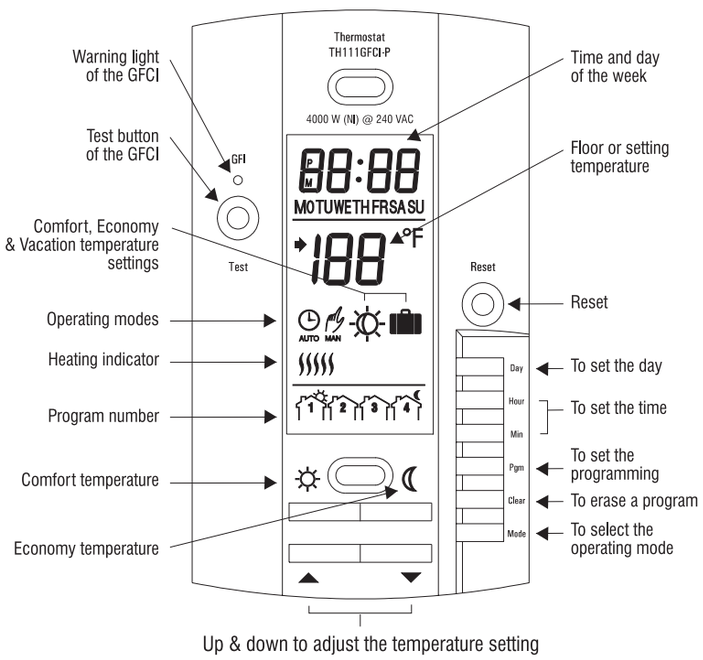
  Adjust the setpoint temperature until heating indicator (≋≋≋) appears on display. Press on TEST button. The test is conclusive if the warning light (GFI) on thermostat is ON and power to the load is cut-off (≋≋≋ remain on display though). If these events do not occur, check the installation. Press on RESET button to reset the GFCI.

- OPERATING MODES

  To select an operating mode, use MODE button.

  AUTO: Runs the program. ▲ or ▼ shows temperature setting and can override temporarily your programming up to the next program

  MAN: Maintains the selected temperature. ▲ or ▼ changes the temperature setting.



INSTALLATION

This thermostat is designed to control floor electric heating systems. The resistive load must not exceed 4000 watts (NI) @ 240 VAC (16.7 A). The thermostat is equipped with a ground fault circuit interrupter (GFCI) and therefore the isolation of the line and load are required for operation. During a ground fault, the two lines of the load will be cut off from the 240 V line. Connect thermostat as shown on diagram.

Electricians or experienced technicians should install the thermostat.

This thermostat is designed to be used with a circuit breaker.

PARTS INCLUDED

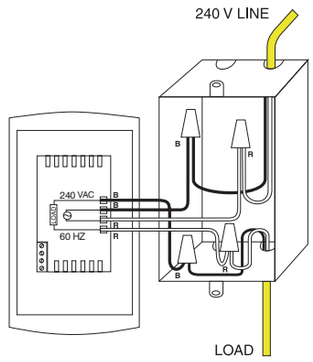
- One (1) TH111 GFCI-P (240 VAC) thermostat
- Two (2) 6-32 screws
- Four (4) solderless connectors (for copper wire)
- One (1) temperature sensor with a 15 foot extension

TURN OFF POWER OF THE HEATING SYSTEM AT THE MAIN POWER PANEL TO AVOID ELECTRICAL SHOCK. Keep air vents of the thermostat clean and free from obstructions.

1) Connecting wires and mounting thermostat

Connect the rear thermostat wires to the 240 V LINE and to the load using solderless connectors for copper wires. See schematic diagram.

Push the excess wire back into the electrical box to prevent interference with the thermostat. Secure the thermostat using two (2) 6-32 screws. Once the thermostat is properly installed, return power to heating system.

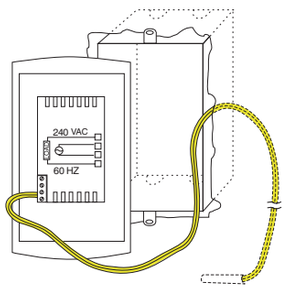


NOTE : All cables and connections must conform to the local electrical code.

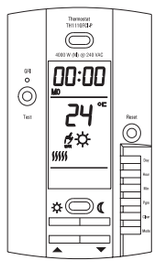
WARNING: Special CO/ALR solderless connectors must be used when connecting with aluminum conductors.

2) Connecting temperature sensor wire

Connect the temperature sensor wire to the two lower screws of the terminal block at the back of the thermostat (no polarity needs to be respected). The wire must pass outside the electrical box and follow the wall down to the floor. The sensing probe should be placed in a representative heat area for maximum system performance. The sensing probe should be centered between the wires in the mat. The temperature sensor wire cannot cross any heater wires and the sensing probe must not be directly or adjacent to a heating wire.



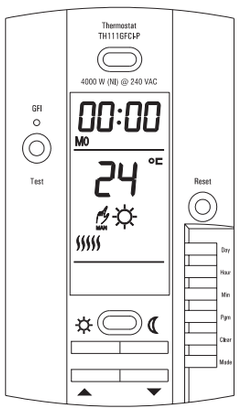
Power-up



When power is applied for the first time, the display must show the time 00:00, the floor temperature and the Manual mode icon (✋ MAN). Other information might show up on the display if installation is defective or does not comply with the instructions. The warning light (GFI) must be off.

The message L0 or HI will appear on the display if the temperature sensor is defective or the temperature is below 0 °C (32 °F) or higher than 60 °C (140 °F). Also, the heating indicator will be present on display and the relay will be closed (current going in the load).

Checking ground fault circuit interrupter (GFCI)



Adjust the setpoint temperature until heating indicator (≋≋≋) appears on display. Press on TEST button. The test is conclusive if the warning light (GFI) on the thermostat is ON and power to the load is cut-off. If these events do not occur, check the installation. Press on RESET button to reset the GFCI.

If the GFCI test fails:
Check the load wires. The thermostat must be in heating mode to carry out the test (heating indicator ON).

The GFCI test should be carried out monthly. If the test fails, cut off the electric power to the heating system and call customer service or return the thermostat to your supplier for verification. If the warning light comes on during normal operation, cut off power to the heating system and have an electrician verify the installation.

OPERATING MODES

The TH111GFCI-P has two (2) operating modes.

MANUAL (✋ MAN)

This mode allows you to maintain a constant temperature of the floor.

1- To activate this mode, press on Mode button to display the ✋ MAN icon.

2- Set the desired temperature using the ▲ ▼ buttons or select the pre-programmed ☼ or ☾ or 💼 settings.
(To select the 💼 setting, press on ☼ and ☾ simultaneously.)

AUTOMATIC (🕒 AUTO)

This mode executes your own programming.

To activate this mode, press on Mode button to display the 🕒 AUTO icon. The ☼ or ☾ icon indicates which temperature setting is used. Also, the icon of the program number will be shown.

Memory back-up

In the event of a power failure, an internal circuit will maintain the programming and the time. But only the time could have to be set if power failure is more than 2 hours.

Early Start function

The thermostat is providing a built-in function enabling it to calculate the optimum time to start the heating system to achieve the desired temperature setting at the programmed time. This function could start the heating system as early as 6 hours prior to the programmed time. To enable this function, set the switch E.S. to “ON” at the back of the thermostat.

PROGRAMMING

Programming the time and day

1- Set the time using the Hour and Min buttons.
2- Set the day using the Day button.

Programming the Comfort, Economy and Vacation settings

The Comfort ☼ , Economy ☾ and Vacation 💼 settings respectively represent the temperatures that you wish to have during the day ☼, at night ☾ or while you are away at work ☾ , or while you are away for an extended period 💼 .

To program your settings

a) To program the Comfort temperature, select the desired degree using the ▲ ▼ buttons and press the ☼ button until the ☼ icon is displayed (app. 3 seconds).

b) To program the Economy temperature, select the desired degree using the ▲ ▼ buttons and press the ☾ button until the ☾ icon is displayed (app. 3 seconds).

c) To program the Vacation temperature, select the desired degree using the ▲ ▼ buttons and press on the ☼ and ☾ buttons simultaneously until the 💼 icon is displayed (app. 3 seconds).

d) Press the Mode button to exit this function and return to the normal operating mode.

Schedule programming

The TH111GFCI-P allows 4 setting changes for each day of the week. There are no pre-set programs.The programs are tailored to perfectly adapt to your life style. The principle is very simple. For each day, enter the time at which you wake up (P1), the time you leave for work (P2), the time you arrive back home (P3) and the time you go to bed (P4).

Program	Mode	Time
1	☼	Wake-up time
2	☾	Leaving time
3	☼	Return time
4	☾	Bed time

NOTE : For temperature increases (Prog. 1 and 3), allow at least 15 minutes per °C. If you have lowered the temperature by 3 °C during the night and you wake up at 7 AM, change the setting at 6:15 AM.

For savings to be obtained, you must lower the temperature for a period of 2 to 3 times the delay required to bring the temperature back to your comfort level.

Example : If your system takes one hour to go from your saving temperature level to your comfort temperature level, it is useless to lower the temperature for a period less than 3 hours.

a) To program your schedule

1- Press on PGM button to access the programming mode.

2- Press on Day button to select the day to be programmed. You can select all days of the week by pressing on Day button for 3 seconds.

3- Press on PGM button to select program 1, 2, 3 or 4.

4- Press on Hour and Min buttons to program the time.

5- When you have completed your programming, press on Mode button to exit this function.

b) To erase a program :

Select the program using PGM and Day buttons, and press on Clear button. The time field displays --:-- when the program is inactive.

c) Example 1 : Comfort period from 7:00 AM to 10:30 PM
Economy period from 10:30 PM to 7:00 AM
Identical schedule for all days of the week.

1- Press on PGM button to access the programming mode.

2- Press on Day button 3 seconds to select every day of the week.

3- Press on Hour button to enter 7:00 AM, Prog. 1 (☼).

4- Press on PGM button again to select Prog. 2 (☾), and press on Hour and Min buttons to enter 10:30 PM.

5- Press on Mode button to exit this function.

d) Example 2 : Comfort period: Monday to Friday from 6:15 AM to 8:15 AM and from 5:00 PM to 10:00 PM.

Schedule/Day	MON.	TUES.	WED.	THU.	FRI.	SAT.	SUN.
PROG. 1 ☼	6:15 AM	6:15 AM	6:15 AM	6:15 AM	6:15 AM	7:30 AM	7:30 AM
PROG. 2 ☾	8:15 AM	8:15 AM	8:15 AM	8:15 AM	8:15 AM	---	---
PROG. 3 ☼	5 PM	5 PM	5 PM	5 PM	5 PM	---	---
PROG. 4 ☾	10 PM	10 PM	10 PM	10 PM	10 PM	11 PM	11 PM

NOTE : *It is faster to program the same schedule for every day and then modify the exception days.*

1- Press on PGM button to access the programming mode.

2- Press on Day button 3 seconds to select every day of the week.

3- Press on Hour and Min buttons to enter 6:15 AM Prog. 1, (☼).

4- Press on PGM button to select Prog. 2 (☾) and Hour and Min buttons to enter 8:15 AM.

5- Repeat step 4 to enter Prog. 3 (5:00 PM) and Prog. 4 (10:00 PM).

NOTE : *When making modifications, make sure you are in the right program.*

To modify the Saturday and Sunday schedules:

6- Press on Day button until SA or SU is displayed.

7- Press on PGM button to select Prog. 1 (☼) and Hour and Min buttons to enter 7:30 AM.

8- Press on PGM button to select Prog. 2 (☾) and then Clear button to erase it.

9- Press on PGM button to select Prog. 3 (☼) and then Clear button to erase it.

10- Press on PGM button to select Prog. 4 (☾) and then Hour and Min buttons to enter 11:00 PM.

11- Press on Mode button to exit this function.

Temporary or permanent temperature bypass

This operation allows you to temporarily modify the floor temperature while you are in the Automatic mode. Simply press on ▲ or ▼ buttons to select the desired temperature, or the ☼ or ☾ button to select the Comfort or Econo settings you have programmed.This temperature will be maintained until the beginning of the next programmed schedule.

You can also switch to the Vacation setting for a prolonged absence by pressing on ☼ and ☾ at the same time.The display will show 💼 icon. In that case, the derogation is permanent. To return to the normal operating mode, press on Mode button.

If you wish to immediately return to the programmed settings, press on Mode button twice.

CHARACTERISTICS

- Model: TH111GFCI-P (240 VAC)
- Supply: 240 VAC, 50/60 Hz
- Load: 16.7 A maximum (Resistive only)
- Power: 4000 watts (NI) @ 240 VAC
- Ground fault circuit interrupter (GFCI): 10 mA TRIP LEVEL
- Approvals: CSA / C, US
- Display range: 0 to 60 °C (32 to 140 °F)
- Setting range: 5 to 40 °C (40 to 104 °F)
- Comfort default setting: 28 °C (82 °F)
- Econo default setting: 18 °C (64 °F)
- Storage: -20 to 50 °C (-4 to 120 °F)

WARRANTY

AUBE TECHNOLOGIES INC. ONE (1) YEAR LIMITED WARRANTY

This product is warranted against material defects and workmanship in normal use for a period of one year, from the date of the original purchase from authorized dealers. During this period, AUBE technologies inc. will repair or replace the product with a new or of equivalent quality at AUBE'S option, without charge, any product proven defective in normal use.

Warranty does not cover transportation costs. Nor does it cover a product subjected to misuse or accidental damage. This warranty does not cover the cost of installation, removal or reinstallation.

This limited warranty is in lieu of all other warranties, obligations or liabilities expressed or implied by the company. In no event shall AUBE technologies inc. be liable for consequential or incidental damages resulting from installation of this product. Some states or provinces do not allow limitations on how long an implied warranty lasts, or the exclusion or limitation of incidental or consequential damages, so the above exclusions or limitations may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

The defective product and the original sale receipt must be returned to the original dealer or shipped pre-paid, insured and addressed to:

Aube technologies inc., 705 Montrichard, Iberville (Quebec), Canada, J2X 5K8

If you have any questions concerning the installation or programming of this product, please call our technical assistance at (450) 358-4600 for the Montreal area or **1-800-831-AUBE** for outside area, Monday to Friday between 8:30 AM and 5:00 PM Eastern time.